Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.   (Previously Presented) A power generation control system comprising:

a fuel cell for generating power from fuel gas and oxidant gas fed thereto;

a target power provider for providing a target power for the fuel cell;

a detector for detecting output power from the fuel cell, the detector detecting actual output voltage of the fuel cell; and

a controller comprising

a target current computing unit which calculates a target current at the target power directly from a nominal power-current characteristic obtained from a nominal output characteristic of the fuel cell, the nominal output characteristic corresponding to a reference output characteristic; and

a command output power computing unit which calculates a command output power of the fuel cell from the product of the target current and the actual output voltage.

2.   (Previously Presented) The power generation control system according to claim 1, further comprising:

a gas control system for controlling pressure and flow rate of the respective fuel gas and oxidant gas, wherein

the controller further comprises

a target gas operation point computing unit which calculates a target gas operation point of the fuel gas and the oxidant gas at the target current based on a gas operation point characteristic which provides pressure and flow rate of the respective fuel gas and oxidant gas for an output current of the fuel cell, and

an output characteristic learning unit which learns an actual output characteristic of the fuel cell based on the output power thereof detected by the detector, and corrects the reference output characteristic of the fuel cell based on the learned actual output characteristic thereof, and wherein

the gas control system controls the pressure and flow rate of the respective fuel gas and oxidant gas based on the target gas operation point calculated by the target gas operation point computing unit, and wherein

the target current computing unit creates a revised power-current characteristic based on the reference output characteristic of the fuel cell corrected by the output characteristic learning unit, and wherein

the target current computing unit calculates the target current at the target power based on the revised power-current characteristic.

3.   (Previously Presented)   The power generation control system according to claim 1, further comprising:

a gas control system for controlling pressure and flow rate of the respective fuel gas and oxidant gas, wherein

the controller further comprises

a target gas operation point computing unit which calculates a target gas operation point of the fuel gas and the oxidant gas at the target current based on a gas operation point characteristic which provides pressure and flow rate of the respective fuel gas and oxidant gas for an output current of the fuel cell, and

an output characteristic learning unit which learns an actual output characteristic of the fuel cell based on the output power thereof detected by the detector, and corrects the reference output characteristic of the fuel cell based on the learned actual output characteristic thereof, and wherein

the gas control system controls the pressure and flow rate of the respective fuel gas and oxidant gas based on the target gas operation point calculated by the target gas operation point computing unit, and wherein

the target gas operation point computing unit revises the gas operation point characteristic based on the reference output characteristic of the fuel cell corrected by the output characteristic learning unit.

4.   (Previously Presented)   The power generation control system according to claim 2, wherein

the detector detects actual output current of the fuel cell in addition to the actual output voltage of the fuel cell, and wherein

the output characteristic learning unit learns the actual output characteristic of the fuel cell based on the actual output current and the actual output voltage detected by the detector.

5.   (Previously Presented)   The power generation control system according to claim 4, wherein

the output characteristic learning unit collects actual output currents and actual output voltages of the fuel cell detected by the detector to correct the reference output characteristic of the fuel cell.

6.   (Previously Presented)   The power generation control system according to claim 4, wherein

the output characteristic learning unit learns the actual output characteristic of the fuel cell based on the actual output currents and the actual output voltages of the fuel cell detected by the detector during a predetermined period.

7.   (Previously Presented)   The power generation control system according to claim 2, further comprising:

a thermometer for measuring an actual temperature of the fuel cell, wherein

the output characteristic learning unit has a plurality of pieces of output characteristic data for various temperatures of the fuel cell, and corrects the reference output characteristic based on the measured actual temperatures of the fuel cell.

8.   (Previously Presented)   The power generation control system according to claim 2, wherein

the target power provider calculates target power by taking into account power consumption of an auxiliary equipment for power generation of the fuel cell, and

when the power-current characteristic of the target current computing unit or the gas operation point characteristic of the target gas operation point computing unit are corrected, a current-auxiliary power consumption characteristic, which provides power consumption of the auxiliary equipment for an output current of the fuel cell, are corrected based on the

reference output characteristic of the fuel cell corrected by the output characteristic learning unit.

9.   (Previously Presented)   A method of controlling power generation of a fuel cell, comprising:

receiving target power for the fuel cell;

detecting an output power from the fuel cell, and detecting an actual output voltage of the fuel cell;

calculating a target current at the target power directly from a nominal power-current characteristic obtained from a nominal output characteristic of the fuel cell; and

calculating a command output power for the fuel cell from the product of the target current and the actual output voltage.

10.   (Previously Presented) The method according to claim 9, further comprising:

controlling pressure and flow rate of a fuel gas and an oxidant gas;

calculating a target gas operation point of the fuel gas and the oxidant gas at a target current based on a gas operation point characteristic which provides pressure and flow rate of the respective fuel gas and oxidant gas for an output current of the fuel cell;

learning an actual output characteristic of the fuel cell based on an output power thereof detected by a detector, and correcting a reference output characteristic of the fuel cell based on the learned actual output characteristic thereof;

controlling the pressure and flow rate of the respective fuel gas and oxidant gas based on the target gas operation point calculated in the calculating a target gas operation point step;

creating a revised power-current characteristic based on the reference output characteristic of the fuel cell corrected by the learning an actual output characteristic step; and

calculating the target current at a target power based on the revised power-current characteristic.

11.   (Previously Presented) The method according to claim 9, further comprising:

controlling pressure and flow rate of a fuel gas and an oxidant gas;

calculating a target gas operation point of the fuel gas and the oxidant gas at a target current based on a gas operation point characteristic which provides pressure and flow rate of the respective fuel gas and oxidant gas for an output current of the fuel cell;

learning an actual output characteristic of the fuel cell based on an output power thereof detected by a detector, and correcting a reference output characteristic of the fuel cell based on the learned actual output characteristic thereof;

controlling a pressure and flow rate of the respective fuel gas and oxidant gas based on the target gas operation point calculated in the calculating a target gas operation point step; and

revising the gas operation point characteristic based on a reference output characteristic of the fuel cell corrected in the learning step.

12.   (Previously Presented) The method according to claim 10, wherein

the detector detects actual output current of the fuel cell in addition to an actual output voltage of the fuel cell, and

the learning an actual output characteristic step further comprises learning the actual output characteristic of the fuel cell based on the actual output current and the actual output voltage detected by the detector.

13.   (Previously Presented) The method according to claim 12, wherein

the learning an actual output characteristic step further comprises collecting actual output currents and actual output voltages of the fuel cell detected by the detector to correct the reference output characteristic of the fuel cell.

14.   (Previously Presented) The method according to claim 12, wherein

the learning an actual output characteristic step further comprises learning the actual output characteristic of the fuel cell based on the actual output currents and the actual output voltages of the fuel cell detected by the detector during a predetermined period.

15.   (Previously Presented) The method according to claim 10, further comprising:

measuring an actual temperature of the fuel cell, wherein

the learning an actual output characteristic step further comprises analyzing a plurality of pieces of output characteristic data for various temperatures of the fuel cell, and correcting the reference output characteristic based on the measured actual temperatures of the fuel cell.

16.   (Previously Presented) The method according to claim 10, wherein

the step of calculating the target current calculates target power by taking into account power consumption of an auxiliary equipment for power generation of the fuel cell, and

when a power-current characteristic or the gas operation point characteristic are corrected, a current-auxiliary power consumption characteristic, which provides power consumption of the auxiliary equipment for an output current of the fuel cell, is corrected based on the reference output characteristic of the fuel cell corrected by the learning an actual output characteristic step.